## REMARKS

Prior to entry of this amendment, Claims 1-2, 4-8, 10-14 and 16-20 were pending in this application. By this amendment, Claims 1-2, 6-8, 10, 12-14 and 18-20 have been amended. Claims 21-22 have been added. The amendments to the claims do not add any new matter to this application. All issues raised in the Office Action mailed November 30, 2004, are addressed hereinafter.

Each pending claim is in condition for allowance over the cited art because one or more elements of each pending claim is not disclosed, taught, or suggested by the cited art.

Claims 1, 4, 6-7, 10, 12-13, 16 and 18-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Shurmer*, U.S. Patent No. 5,974,237, in view of *St. Laurent*, "describing Your Data: DTDs and XML Schemas, December 1, 1999, O'Reilly XML.com. Claims 2, 8, 14 and 20 stand rejected under § 103(a) as being unpatentable over *Shurmer* and *St. Laurent*, further in view of *"Official Notice."* Claims 5, 11 and 17 stand rejected under § 103(a) as being unpatentable over *Shurmer* and *St. Laurent*, further in view of *Schuster*, U.S. Pat. No. 6,363,053.

The rejections are herein respectfully traversed.

### REJECTION OF INDEPENDENT CLAIMS 1, 7, 13 AND 19 UNDER 35 U.S.C. 103(a)

Embodiments of the present invention provide methods of verifying that a service provider is providing the level of service guaranteed in a service level contract made between the service provider and a customer. In particular, embodiments of the present invention define metric tests for measuring a level of service of a particular type of network operation being provided to a customer, each metric test including a set of one or more threshold values

for that particular type of network operation, and specific time periods for performing the tests, in a schema. The set of threshold values for each metric test corresponds to a range of acceptable performance specified in a Service Level Agreement for the type of network operation that the metric test measures. The metric tests are distributed to agents that configure network devices to perform the metric tests during the specified time periods and receive result information from the devices performing the metric tests.

Representative independent method claim 1, as amended, recites the step of:

> receiving a schema that provides a configuration for monitoring a service level contract between the service provider and a particular customer, wherein the schema comprises:
>
> data defining one or more metric tests for monitoring the level of network service being provided to the particular customer by the service provider, each said metric test measuring a level of service of a particular type of network operation, and including a set of one or more threshold values that correspond to a range of acceptable performance for the particular type of network operation, and
> information defining a specific time range for when the one or more metric tests are to be performed;

The cited prior art references do not teach or suggest every element of this step.

*I. Shurmer Does Not Teach or Suggest Metric Tests for Measuring a Level of Service*

The Office Action asserts that Col. 1, lns 47-60, Col. 6, lns 57-67; Col. 7, lns 1-9, Col. 8, lns 3-14, Col. 14, lns 39-48, Col. 16, lns 39-43 and Col. 20, lns 52-56 of *Shurmer* teach "data defining one or more tests for monitoring the level of network service being provided to a particular customer." (Office Action, Page 3, paragraph 6b). The claims have been amended to clarify that the tests are *metric* tests. The word "metric" is defined in Webster's dictionary as meaning "of or relating to measurement." Accordingly, the claimed invention monitors a level of service by *measuring* a level of service of one or more network

operations. *Shurmer* does not disclose metric tests of any kind, much less metric tests for measuring a level of service of network operations. *Shurmer* only discloses that a user inputs operational parameters and that signal data corresponding to the selected network elements is collected. The operational parameters in *Shurmer* are merely "performance parameters describing the performance of a network element" or "a service parameter, describing a service supported by one or a plurality of network elements." (Col. 6, lns 57-62). The cited sections of *Shurmer* only disclose "a plurality of monitoring sessions, each monitoring a respective operational parameter or set of operational parameters." Interactively monitoring an operational parameter does not teach or suggest measuring a level of service with a metric test, as featured in the claimed invention.

*II. Shurmer Does Not Teach or Suggest Measuring a Level of Service of a Particular Type of Network Operation*

Even if the monitoring taught by *Shurmer* suggested metric tests for measuring a level of service, which it does not, *Shurmer* only discloses monitoring individual components, not measuring a level of service for a network operation, as featured in the claimed invention. Col. 14, lines 45-50, cited by the Office Action in Paragraph 6b, teaches: "The performance of a network element can be measured with respect to a specific service which will only measure the performance data on the individual component parts of the node element or switch, that the service connection traverses." Significantly, *Shurmer* teaches at Col. 14, lns 19-24: "[s]ince monitoring is by collection of component signals from individual components of node elements, it is not possible to directly measure data traffic in a customer service flowing along the network. Data concerning a service is obtained by inspecting

component signals generated from individual components which support a particular service." Therefore, *Shurmer* only teaches that the performance of individual network components can be measured, while the claimed invention features measuring a level of service of a network operation.

*III. Shurmer Does Not Teach or Suggest a Metric Test Including a Set of One Or More Threshold Values*

The claimed invention features a metric test used to measure a level of service for a particular network operation that includes a set of one or more threshold values that correspond to a range of acceptable performance for that type of network operation being measured with the metric test. As described in the present specification at Page 11, lines 16-20, "the standardized templates may include a group of metric test parameters that has been approved for verifying the level service that is being provided to a customer. The metric test parameters define a range of values that may be used for verifying the level service that is being provided to a customer." Page 20, lines 3-4, further discloses: "in general, each type of metric has its own unique set of possible threshold values."

*Shurmer* does not teach any type of metric test, much less a metric test that includes a set of one or more threshold values corresponding to a range of acceptable performance for the metric test.

*IV. Shurmer Does Not Teach or Suggest Distributing Metric Tests to Agent, and Agents Configuring Devices to Automatically Perform Metric Tests*

Representative claim 1 additionally recites the step of:

> distributing the one or more metric tests to one or more agents, wherein the one or more agents configure devices associated with the network to automatically perform the one or more metric tests during the specific time range, and

receive result information from the devices performing the one or more metric tests.

The cited prior art references do not teach or suggest every element of this step.

*Shurmer* describes a user actively monitoring the performance of individual network components, not network devices configured to automatically perform the metric tests. *Shumer* teaches at Col. 20, lines 48-53: "Each user can operate a client station to perform one or more data monitoring sessions by opening a monitoring session in step 130. In each case, a session manager display is opened in step 131... Operational parameters to be monitored in the monitoring session are input in step 140." The user "can specify one or more of a plurality of connections ... and be presented with a resource display 111 identifying the individual node elements which support the services between those communications network customers." This does not teach or suggest an agent configuring devices to automatically perform tests – metric tests are never automatically performed in *Shurmer*. In *Shurmer*, the operational parameters are interactively entered by a user, and devices are monitored interactively by the user, not configured to automatically perform metric tests.

Furthermore, the claimed invention features that the metric tests are distributed to agents, wherein the agents configure the devices to automatically perform the metric tests. *Shurmer* does not teach or suggest this feature. The Office Action asserts at Page 11, paragraph 21 that the "performance data session server application" of *Shurmer* teaches this feature. However, the performance data session server application does not distribute metric tests to an agent, nor does it receive distributed tests. Furthermore, the performance data session server application does not configure network devices to automatically perform metric tests.

For these reasons, the independent claims 1, 7, 13 and 10 are patentable over the cited references. Accordingly, reconsideration and withdrawal of the rejections of these claims is respectfully submitted.

Dependent claims 2, 4-6, 8, 10-12, 14, 16-17 and 19-22 all include the limitations of the independent claims by virtue of their dependence. Therefore the dependent claims are patentable over the cited art for at least the reasons set forth herein. Furthermore, the dependent claims recite additional limitations that independently render them patentable over the cited art. In view of the patentability of the independent claims, only some of the dependent claims are further argued in order to expedite prosecution.

**DEPENDENT CLAIMS 2, 8, 14 AND 20**

Representative claim 2 recites:

> for each metric test defined in the schema, determining whether result information for that metric test is within the set of one or more threshold values included in that metric test; and
> creating and storing reporting information that indicates whether the customer is actually receiving, during the specific time range, the level of network service offered by the service provider in the service level contract, said reporting information based on said determinations.

The cited prior art references do not teach or suggest all of these limitations.

As noted above, *Shurmer* does not teach or suggest metric tests that include a set of threshold values. Therefore, *Shurmer* cannot possible teach or suggest determining whether result information for a metric test is within the set of threshold values included in the metric test. *Shurmer* only discloses that "each user is presented with an individual graphical display of selected performance parameters for each monitoring session" (Col. 20, lines 62-64).

Applicants respectfully request the withdrawal of the rejection of claims 2, 8, 14, and 20 on at least this basis.

**DEPENDENT CLAIM 21**

New claim 21 features that the range of threshold values included with a metric test is configured according to a level of performance specified in a Service Level Agreement.

There is nothing in *Shurmer* that ties the performance parameters received during a monitoring session with the level of service specified in a service level agreement. Even if *Shurmer* taught metric tests that include a set of threshold values, which it does not, there is no teaching in *Shurmer* of associating metric test threshold values with a service level agreement. *Shurmer* teaches passive monitoring and reporting; the claims involve active testing for compliance with a service level agreement through thresholds included with metric tests.

Claim 21 is allowable for at least these reasons.

**DEPENDENT CLAIM 22**

New claim 22 features that the metric test is selected from the group consisting of ICMP metric test, UDP metric test, DNS metric test, HTTP metric test and VoIP metric test.

As is disclosed at Page 19, lines 20-24, "each SLA encapsulates the type of metric which should be monitored (e.g. DNS response time)... The metric type defines the type of test that is to be performed." Examples of tests include ICMP metrics, UDP metrics, DNS metrics, HTTP metrics and VoIP metrics. (Page 20, lines 1-2.)

*Shurmer* does not teach any of these types of metric tests.

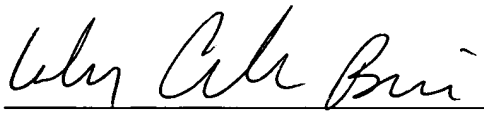
Claim 22 is allowable for at least these reasons.

## CONCLUSION

It is respectfully submitted that all of the pending claims are in condition for allowance and the issuance of a notice of allowance is respectfully requested. If there are any additional charges, please charge them to Deposit Account No. 50-1302 (Docket No. 50325-0504).

The Examiner is invited to contact the undersigned by telephone if the Examiner believes that such contact would be helpful in furthering the prosecution of this application.

Respectfully submitted,
HICKMAN PALERMO TRUONG & BECKER LLP



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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

on March 30, 2005 by 
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